

## Small Signal Switching Diodes

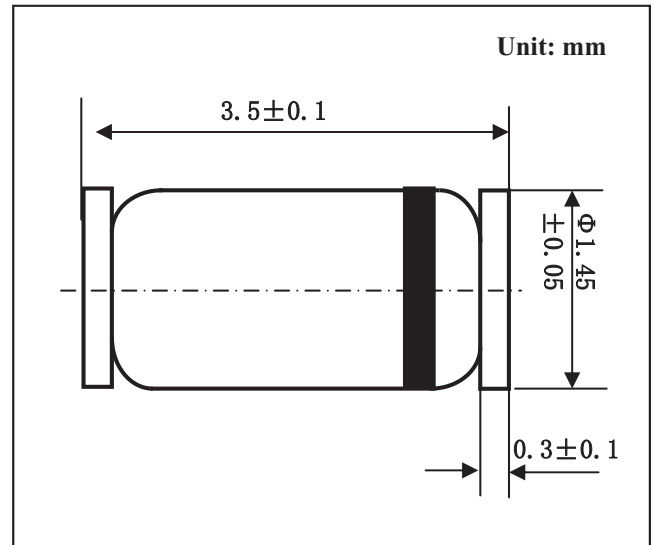
VOLTAGE RANGE: 75V PEAK PULSE POWER:500mW

### Features

- Fast switching diode
- Silicon epitaxial planar diode

### MECHANICAL DATA

- Case: MELF(LL34) Glass Case
- Polarity: Color band denotes cathode end
- Mounting Position: Any



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

		LL4448	UNITS
Reverse voltage	$V_R$	75	V
Peak reverse voltage	$V_{RM}$	100	V
Average forward rectified current Half wave rectification with resistive load at $V_R=0V$	$I_o$	150	mA
Forward surge current at $t_p=1\mu s$	$I_{FSM}$	2.0	A
Power dissipation at $t_{amb}=25^\circ C$	$P_{tot}$	500 <sup>1)</sup>	mW
Junction temperature	$T_J$	175	°C
Storage temperature range	$T_{STG}$	-55--- +175	°C

## Electrical Specification (TA=25°C unless otherwise specified)

		MIN	TYP	MAX	UNITS
Forward voltage @ $I_F=5.0mA$ @ $I_F=100mA$	$V_F$	0.62 -	- 0.93	0.72 1.0	V
Leakage current at $V_R=20V$	$I_R$	-	-	25.0	nA
at $V_R=75V$	$I_R$	-	-	5.0	μA
at $V_R=20V, T_J=150^\circ C$	$I_R$	-	-	50.0	μA
Capacitance at $V_R=0V, f=1MHz, V_{HF}=50mV$	$C_{tot}$	-	-	4.0	pF
Voltage rise when switching on tested with 50mA pulses $t_p=0.1\mu s$ , rise time < 30ns, $f_p=5$ to 100KHz	$V_{fr}$	-	-	2.5	V
Reverse recovery time from $I_F=10mA$ $V_R=6V, R_L=100\Omega$ , at $I_R=1mA$	$t_{rr}$	-	-	4.0	ns
Thermal resistance junction to ambient	$R_{\theta JA}$	-	-	500 <sup>1)</sup>	K/W
Rectification efficiency at 100MHz, $V_{RF}=2V$	$\eta_V$	0.45	-	-	

# RATINGS AND CHARACTERISTIC CURVES

FIG 1-FORWARD CHARACTERISTICS

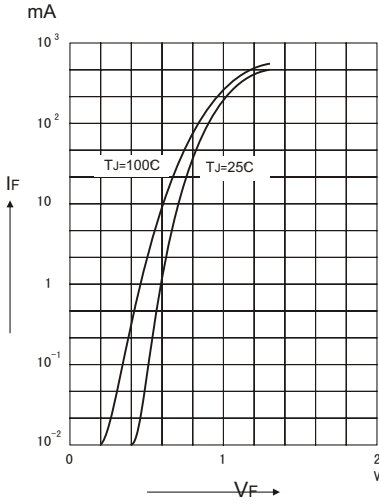


FIG 2: DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT

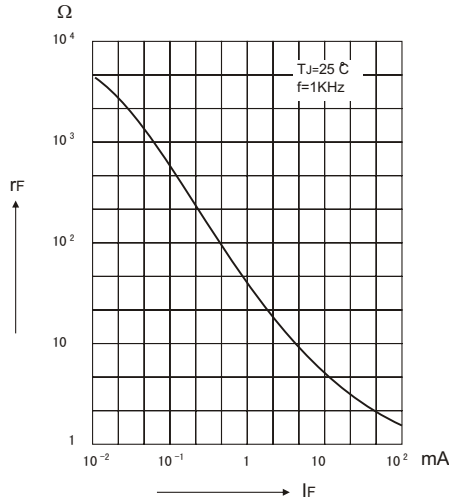


FIG 3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE

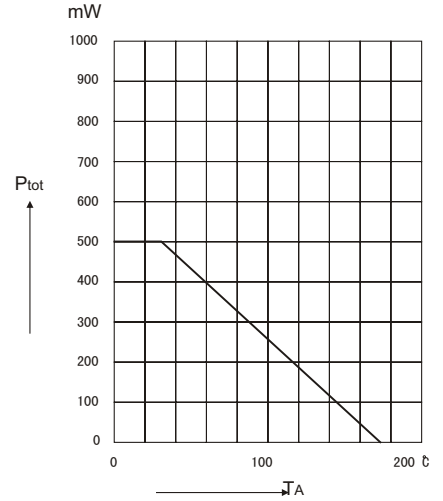


FIG. 4-RELATIVE CAPACITANCE VERSUS VOLTAGE

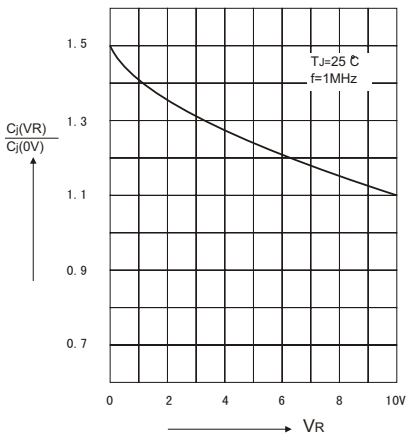


FIG.5 RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

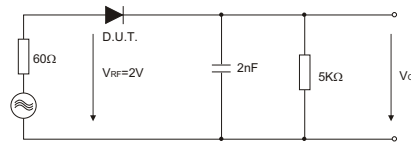


FIG 6: LEAKAGE CURRENT VERSUS JUNCTION TEMPERATURE

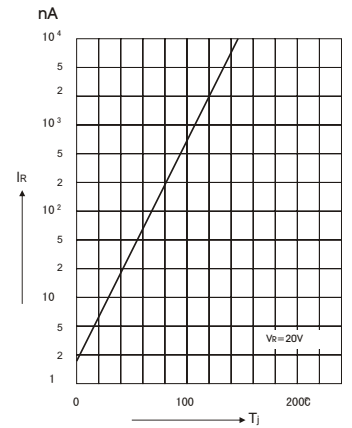


FIG 7: ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

